



REPORT

CONFIDENTIAL

APPROVED

VERSION 1.0

INTERCONNECTION GRID CODE FOR THE PAN ARAB ELECTRICITY MARKET

PREFACE AND GENERAL CONDITIONS

Arab Fund Grant Number 06/2018

Partial reproduction of this document is permitted only with the written permission from the Arab Fund or the League of Arab States.

N. of pages 35

N. of pages annexed 5

Issue date 22/05/2020

Prepared Fabio Riva, Stefano Mandelli, Flemming Christensen, Antonio Carrano, Carlo Sabelli

Verified Daniele Canever

Approved Bruno Cova

CESI

Shaping a Better Energy Future

KEMA Labs

IPH

EGH

ISMES

ISTEDIL

ENERDEX

Table of contents

PREFACE TO THE ARAB GRID CODE	3
GENERAL CONDITIONS.....	6
GC 1 OBJECTIVE	7
GC 2 SCOPE OF APPLICATION	8
GC 3 MODIFICATION OF THE ARAB GRID CODE	9
GC 3.1 Introduction and interpretation.....	9
GC 3.2 Initiation of amendments.....	9
GC 3.3 Review and approval of amendments to the Arab Grid Code.....	10
GC 3.4 Experts and other assistance	12
GC 3.5 Interpretation Bulletins	12
GC 4 ORGANIZATION OF THE PAEM.....	13
GC 5 UNFORESEEN CIRCUMSTANCES.....	14
GC 6 FORCE MAJEURE	15
GC 7 NON-COMPLIANCE AND DEROGATIONS	16
GC 7.2 Derogations of National / Regional Grid Codes from one or more provisions of the Arab Grid Code	16
GC 7.3 Derogation provisions as regards the Connection Code	22
GC 7.4 Derogation provisions as regards the Operation Code	23
GC 8 INTERPRETATION OF THE ARAB GRID CODE	24
GC 9 HIERARCHY OF GOVERNANCE DOCUMENTS.....	25
GC 10 CONFIDENTIALITY	26
GC 11 LANGUAGE.....	27
GC 12 REFERENCES	28
GC 13 ANNEX A	31
GC 13.1 Scope	31
GC 13.2 Description of Governing Institutions.....	31
GC 13.3 PAEM Regulation - The Pan-Arab ARC	32
GC 13.4 PAEM Administration and Operation – The Regional Market Facilitator	33
GC 13.5 The Arab TSOs Committee.....	34

PREFACE TO THE ARAB GRID CODE



Background

To-date, the **Grids** of most of the Arab countries have been interconnected at various voltage levels. Namely, there are three (3) interconnection blocks:

1. **Mashreq** block: which included the electrical **Grids** of Egypt, Iraq, Jordan, Libya, Lebanon, Palestine, Syria and Turkey.
2. **Maghreb** block: which includes the electrical **Grids** of Tunisia, Algeria and Morocco.
3. **GCC** interconnection: which includes the electrical **Grids** of Saudi Arabia, Kuwait, Bahrain, Qatar, U.A.E. and Oman.

Projects are currently underway to connect the existing blocks and the **Isolated Systems**. To increase the amount of energy exchanged among the Arab countries, the **League of Arab States (LAS)** has led the coordination with the Arab countries to establish a joint **Pan-Arab Electricity Market (PAEM)**. A vital component of the **PAEM** is the **Arab Grid Code**, which is meant to govern the technical aspects of the regional electricity market in order to provide a set of principles governing the status, implementation and development of **Arab International Interconnection**.

Envisaged role of the Arab Grid Code

The **Arab Grid Code** is consistent with two other governance documents under the **PAEM**, that is the **General Agreement (GA)**, governing legal aspects of regional trade, and the **PAEM Agreement**, governing commercial aspects of regional trade.

The operation of a national **Electricity System** in an interconnection framework affects the distribution of flows close to the borders and the whole interconnected **Electricity System** as far as the balancing of the interconnected **Electricity System** is concerned.

Accordingly, this mutual influence leads to unavoidable interferences between the provisions in this **Arab Grid Code** and the **National Grid Codes**.

Despite the unifying effects of the physical laws governing the **Networks**, the standardization progress, and the uniformity among products of the electricity industry, differences between this **Arab Grid Code** and the **National Grid Codes** can induce differences in matter of:

- a) Organization to be adapted.
- b) Insufficient power of the **TSOs** to transfer the obligations to the users of the grid.
- c) Double work to comply with more than one code even if similar.
- d) Economy.
- e) Changes in merit orders in managing the resources.
- f) Loadability of the **Network** elements.

To solve potential interferences between the provisions in this **Arab Grid Code** and the **National / Regional Grid Codes**, reference is made to Art. 2.1.8 and 3.2.6. of **GA**, as explained in Article GC 2.1.2.

In interconnected **Electricity Systems** cooperation is pivotal. If efficiency is pursued, new centralized procedures must be built, as they concern new centralized processes at regional level. For example, **UCTE**¹ is a successful story of voluntary association proving the importance of the spirit of cooperation. **TSOs** in **UCTE** covered almost the whole interconnected **Electricity System** in Continental Europe, even without the formal support

¹ UCTE was established in 2000 as a spin-from UCPTTE and disbanded in 2008.

of the Governments, managed to gather all the **TSOs** for cooperation in a supportive way and equal partnership.

According to the aspects previously highlighted, an organizational structure of entities is required. Entities dedicated to the coordination of interconnection matters for **Regions** are envisioned and should play a role because of their pivotal function in modern **Electricity Systems**.

In this regard, the current state of the **Member States** is characterized by some national **Grids** which are already organized according to **Regional Groups**, having already **National Grid Codes** (Operation and Planning) which are coordinated with the rules governing the **Regional TSOs**. Such systems have already developed a solid background with practices specific to an interconnection environment. It follows that:

- a) a harmonization at different levels of the codes needs to be considered;
- b) the central entities have already a valuable experience helpful to build up procedures and methodologies fitting the purposes of a fast development of Market;
- c) the participation to the activities for the development of the **Arab Grid Code** should be encouraged, avoiding double counting of votes in the decisions and considering that **TSOs** are the ultimate responsible subjects for the operation.

Overview of the PAEM

The **Arab Grid Code** follows the provisions of the **GA** as per the description of the institutional structure created to regulate and operate the **PAEM**, and the identifications of the different classes of **PAEM** participants, and their rights and obligations under the **PAEM Agreement** and this **Code**. The institutional organization governing the **PAEM** is specified in the **GA** and summarized in Chapter GC 4 of the **General Conditions**.

Contents of the Arab Grid Code

The **Arab Grid Code** includes the following contents:

- a) The **Glossary and Definitions**.
- b) The **Preface and General Conditions**.
- c) The **Planning Code**.
- d) The **Connection Code**.
- e) The **Operation Code**.
- f) The **Scheduling and Dispatching Code**.
- g) The **Data Exchange Code**.
- h) The **Metering Code**.

GENERAL CONDITIONS



GC 1 OBJECTIVE

- GC 1.1.1 The **Arab Grid Code** governs technical aspects of the **PAEM** to provide the general rules and a set of principles governing the status, the operation, and the development of **Arab International Interconnections**.
- GC 1.1.2 Technical procedures are not within the scope of the **Arab Grid Code**, since their definition is the outcome of bilateral agreements and negotiations among the single **Member States**.
- GC 1.1.3 The **Arab Grid Code** is consistent with and complements the **GA**, governing legal aspects of regional trade, and the **PAEM Agreement**, governing commercial aspects of regional trade, towards the implementation of the **PAEM**, within the **Pan-Arab Advisory and Regulatory Committee (Pan-Arab ARC)**, under the **Arab Ministerial Council for Electricity**.



GC 2 SCOPE OF APPLICATION

- GC 2.1.1 The **Arab Grid Code** applies to the interconnection and concerns how to develop and operate the **PAEM Electricity System**, safeguarding security and economy, in order to facilitate the development of the electricity market in the Pan-Arab region for the benefit of the consumers.
- GC 2.1.2 Pursuant to Article 3.2.6 of the **GA**, "*The Arab Grid Code will initially act as a guide until the market committees have been formed and are operational. Within one year of becoming operational, the Pan-Arab ARC will review and approve the Arab Grid Code, and once approved the Arab Grid Code will become mandatory. If requested by a Member State, the Pan-Arab ARC will establish a grace period to allow the Member States the time deemed necessary to meet the full requirements of the Arab Grid Code*". In this framework, and according to Article 2.1.8 of the **GA**, "*Each Member State shall be responsible for ensuring that its national regulations are consistent with the Arab Grid Code*".
- GC 2.1.3 **TSOs** shall proactively cooperate in deploying the indications of this **Arab Grid Code**. **TSO** shall work for a harmonization of practices without jeopardizing the security of operation putting in place the following actions, at least:
- a) Providing high level technical support to the **Member States** in the discussions for approving the **Arab Grid Code** and in proposing future improvement.
 - b) Taking part to the process that aims at drafting procedures and designing steps to finalize the **Arab Grid Code** and derived detailed application documents.
 - c) Striving for the unanimity when approving documents.
 - d) Self-declare the main noncompliance and negotiate a time to overcome them.
 - e) Supporting a compliance monitoring system aiming to check the progresses.
- GC 2.1.4 The **Regional TSOs** are also subject to the **Arab Grid Code**. They are also admitted to the works of the relevant committees and must contribute to the coordination of centralized functions.
- GC 2.1.5 **Grid Users** shall comply with the **Arab Grid Code** through the compliance with the **National Grid Codes** or **Regional Grid Codes**.

GC 3 MODIFICATION OF THE ARAB GRID CODE

GC 3.1 Introduction and Interpretation

GC 3.1.1 The provisions of this **Arab Grid Code** may only be amended when the applicable procedures set forth in this Chapter GC 3 have been followed. An amendment to this **Arab Grid Code** becomes effective only upon approval by the **Pan-Arab ARC** or the **Arab TSOs Committee** according to the procedures set forth in this Chapter GC 3, and considering Article 3.2.7 of the **GA**, stating “ *The Member States acknowledge that [...] the Arab Grid Code may be amended without further amendment to this General Agreement provided that the terms of the PAEM Agreement and the Arab Grid Code do not conflict with the provisions of this General Agreement as a result of such amendment*”. Amendments can be proposed by **Governing Institutions**, the **Arab TSOs Committee** or **PAEM Participants** according to the procedures set forth in this Chapter GC 3. In formulating and approving amendments to this **Arab Grid Code**, the **Pan-Arab ARC** and the **Arab TSOs Committee** will take into consideration the objectives of the **PAEM** as set forth in the **GA**.

GC 3.2 Initiation of Amendments

GC 3.2.1.1 A **PAEM Participant**, a national or **Regional TSO** or the **Regional Market Facilitator** may file an amendment submission to the **Arab TSOs Committee** to propose a review of one or more amendments to this **Arab Grid Code**. The amendment submission will include a statement of the reasons for which an amendment may be necessary or desirable.

GC 3.2.2 The **Arab TSOs Committee** may request that the **Person** submitting the amendment submission provides further details.

GC 3.2.3 The **Pan-Arab ARC** will publish quarterly a **Regulation Report**. In the **Regulation Report**, the **Pan-Arab ARC** will identify distortions and other problems associated with the **PAEM**, and based on its analysis, will propose improvements, including, as necessary, recommendations for amendments to the **PAEM Agreement** and this **Arab Grid Code**. In forming its analysis and recommendations in the **Regulation Report**, the **Pan-Arab ARC** will take into consideration the amendment submissions filed with the **Arab TSOs Committee**, as well as those generated by the **Pan-Arab ARC** itself. The **Regulation Report** will include a copy of each amendment submission.

GC 3.2.4 The **PAEM Participants**, the **TSOs**, the **Regional Market Facilitator** and the **Arab TSOs Committee** will have a period of two weeks from the time the **Regulation Report** is **Published** to file written comments with the **Pan-Arab ARC**.

GC 3.2.5 The **Pan-Arab ARC** will file the **Regulation Report** to the **Ministerial Council** when it is satisfied that the report takes into consideration the views of the **Parties** that have filed amendment submissions or written comments on the

Regulation Report. An explanatory flowchart showing the steps for the initiation of the amendments is displayed in Figure GC 1.

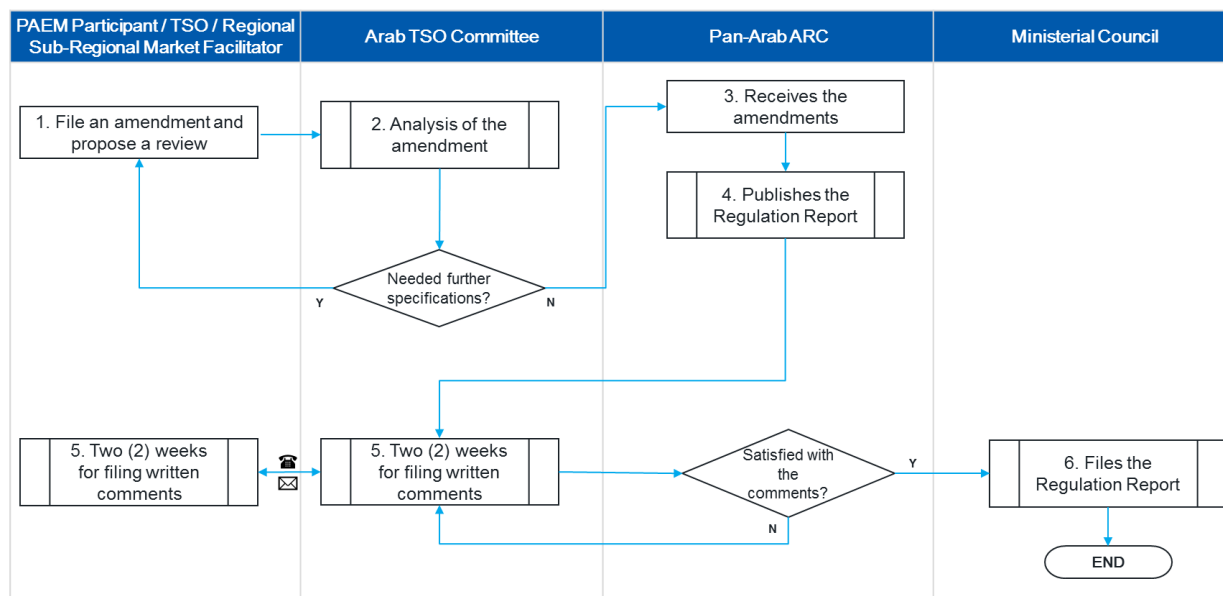


Figure GC 1 Flowchart of the steps for initiation of the Arab Grid Code amendments

GC 3.3 Review and Approval of Amendments to the Arab Grid Code

GC 3.3.1 The **Arab TSOs Committee** will review the proposed amendments and determine the appropriate procedure and timetable for review and approval of the proposed amendments. The **Arab TSOs Committee** will have regard for the significance and urgency of the proposed amendments when developing the procedure and timetable for the review.

GC 3.3.2 When proposed amendments are minor and relate to secondary documentation referenced in the **Arab Grid Code**, the **Arab TSOs Committee** will document the arguments related to the proposed amendments along with its decision and **Publish** its decision on its website. The **Arab TSOs Committee** will implement the approved amendments into the **Arab Grid Code**.

GC 3.3.3 When proposed amendments are not minor, the **Arab TSOs Committee** will **Publish** the proposed amendments on its website, inviting written submissions concerning the matter by a specified date.

GC 3.3.4 Where in the opinion of the **Arab TSOs Committee** there is consistency among the views expressed in the written submissions, it will document the arguments related to the proposed amendments along with its recommendations and forward the documentation to the **Pan-Arab ARC** for review and approval. Once approved by the **Pan-Arab ARC**, the **Arab TSOs Committee** will make the approved amendments to the **Arab Grid Code**.

GC 3.3.5 Where in the opinion of the **Arab TSOs Committee** there is a diversity of views expressed in the written submissions, it will notify all **PAEM Participants** and the

Governing Institutions of the procedure and schedule for a review and approval process to be carried out by the **Pan-Arab ARC**. The notification will include:

- a) Documentation of the proposed amendments.
- b) The date or dates when the **Pan-Arab ARC** will complete its review and decide on the proposed amendments.

GC 3.3.6 Following its review, the decision of the **Pan-Arab ARC** will be published on its website including the proposed amendments and the reasons for its decision. The **Arab TSOs Committee** will make the approved amendments to this **Arab Grid Code**.

GC 3.3.7 In situations where the **Arab TSOs Committee** feels an amendment to the **Arab Grid Code** precludes the review procedure identified in this Section GC 3.3, it will publish an interim amendment with the intent that the interim amendment will be in effect only until such time as the review procedure identified in this Section GC 3.3 can be formally conducted.

GC 3.3.8 An explanatory flowchart of the steps for review and approval of the amendments is displayed in Figure GC 2.

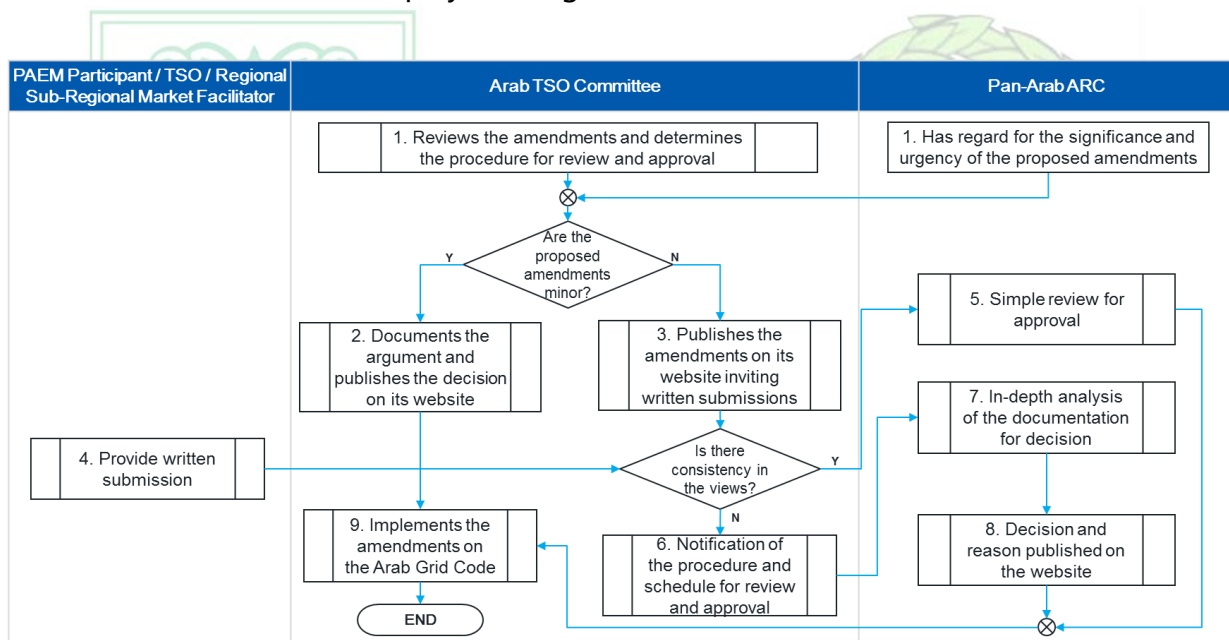


Figure GC 2 Flowchart of steps for review and approval of Arab Grid Code amendments.

GC 3.4 Experts and Other Assistance

GC 3.4.1 The **Arab TSOs Committee** and the **Pan-Arab ARC** may hire such consulting assistance and seek such expert external advice as may be necessary or desirable for the purpose of the fulfillment of its responsibilities under this Chapter GC 3.

GC 3.4.2 In carrying out any of its responsibilities under this Chapter GC 3, the **Arab TSOs Committee** and the **Pan-Arab ARC** may solicit the assistance of the **Regional Market Facilitator** and the **TSOs**.

GC 3.5 Interpretation Bulletins

GC 3.5.1 The **Arab TSOs Committee** may, from time to time upon receipt of material requests for clarification of the interpretation or application of this **Arab Grid Code**, publish bulletins as to the interpretation or application of this **Arab Grid Code**. The **Arab TSOs Committee** will give notice to all **PAEM Participants** and **Governing Institutions** of any bulletins so **Published**.



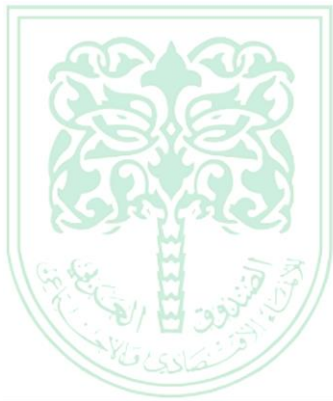
GC 4 ORGANIZATION OF THE PAEM

- GC 4.1.1 The **Arab Grid Code** follows the provisions of the **GA** as per the description of the institutional structure created to regulate and operate the **PAEM**, and the identifications of the different classes of **PAEM Participants**, and their rights and obligations under the **PAEM Agreement** and this **Code**.
- GC 4.1.2 For referencing purposes, Annex A summarizes the main insights on this matter. Any change in the **GA** on this matter shall prevail on the contents of Annex A.



GC 5 UNFORESEEN CIRCUMSTANCES

- GC 5.1.1 If circumstances related to **PAEM** transactions arise, which are not contemplated by the provisions of this **Code**, the **Pan-Arab ARC** shall, to the extent reasonably practicable in the circumstances, consult with all affected **Facility Owners, TSOs** and other relevant **Parties** to reach agreement as to what should be done.
- GC 5.1.2 If agreement between the **Pan-Arab ARC**, and such **Facility Owners, TSOs** and other relevant **Parties** cannot be reached in a reasonable time, the **Pan-Arab ARC** shall determine the best course of action according to the principle of **Good Utility Practice**.
- GC 5.1.3 The instructions defined by the **Pan-Arab ARC** shall be consistent with the current national provisions of affected **TSOs** and other **Parties**.
- GC 5.1.4 The affected **Facility Owners, TSOs** and other relevant **Parties**, shall comply with all instructions given by the **Pan-Arab ARC**. The **Pan-Arab ARC** shall start the procedure for reviewing the **Code** if needed.



GC 6 FORCE MAJEURE

GC 6.1.1 In situations of **Force Majeure Event**, the provisions of this **Arab Grid Code** may be suspended in whole, or in part, pursuant to any directions given by the **Pan-Arab ARC**.

GC 6.1.2 A **Party** will not be liable to any other **Party** for any failure or delay in the performance of any of its obligations under this **Arab Grid Code** to the extent that such failure or delay is due to a **Force Majeure Event**:

- a) For so long as the Force Majeure Event continues, and for such reasonable period thereafter as may be necessary for the Party to resume performance of the obligation.
- b) Where and to the extent that the failure or delay in performance would not have been experienced but for such **Force Majeure Event**.

GC 6.1.3 If a **Force Majeure Event** prevents or delays a **Party** from performing any of its obligations under the **Arab Grid Code**, that Party shall:

- a) Promptly notify any other **Party** involved and the **Pan-Arab ARC** of the **Force Majeure Event** within three (3) days from the date on which the **Party** becomes aware of the occurrence of the **Force Majeure Event**. The notice shall include:
 - i. the assessment in good faith of the nature of the Force Majeure Event;
 - ii. the effect that the Force Majeure Event will have on its ability to perform any of its obligations;
 - iii. the measures that the Party proposes to implement in order to alleviate the impact of the Force Majeure Event.
- b) Not be entitled to suspend performance of any of its obligations under the **Arab Grid Code** to any greater extent or for any longer time than the **Force Majeure Event** requires.
- c) Use its **Best Efforts** to mitigate the effects of the **Force Majeure Event**, remedy its inability to perform, and resume full performance of its obligations.
- d) Notify the **Pan-Arab ARC** and the other **Parties** and as soon as practicable **Publish** notice of any material change in the information contained in any previous notice given and **Published** pursuant to this Chapter GC 6.
- e) **Publish** notice to the other **Parties** of the cessation of the **Force Majeure Event** and when it resumes to perform any obligation affected by the **Force Majeure Event**.

GC 6.1.4 The **Arab Grid Code** contains provisions that shall be respected while the **Electricity System** is in a high risk or in **Emergency State**. Nothing in Chapter GC 6 shall excuse a **Party** from performing any of its obligations required by these provisions in this case.

GC 7 NON-COMPLIANCE AND DEROGATIONS

GC 7.1.1 This Chapter summarizes the process for requesting a derogation in the following three cases:

- a) Derogations of **National / Regional Grid Codes** from one or more provisions of the **Arab Grid Code**. In this case, derogations shall be requested by **TSOs** or **Regional TSOs**.
- b) Derogation provisions as regards the **Connection Code**, that are meant for addressing cases of non-compliances of **Facility Owners** towards the **National Grid Code** (once adopted the **Arab Grid Code**), that is **Facility Owners** request a derogation to the relevant **TSO**.
- c) Derogation provisions as regards the **Operation Code**, that are meant for addressing the cases in which **TSOs** may grant derogations, to be analyzed case by case, to single **Grid Users**.

GC 7.1.2 In case GC 7.1.1b) and GC 7.1.1c), the provisions provided are not meant to substitute the relevant own national derogation policies of each **Member States**, rather to provide general rules to enhance the harmonization of derogation processes among the **Member States**.

GC 7.1.3 This Chapter GC 7 also sets out the criteria which shall be adopted when considering a derogation request, and the process which shall be followed.

GC 7.1.4 The provisions of this Chapter shall be updated as required from time to time to reflect changes in the **Codes**, in the **GA** and **PAEM Agreement** and respective processes.

GC 7.2 Derogations of National / Regional Grid Codes from one or more provisions of the Arab Grid Code

GC 7.2.1 *Derogation Definition*

GC 7.2.1.1 A derogation is a direction from the **Pan-Arab ARC** relieving the **Party** from its obligation to comply with a requirement in specified circumstances and to a specified extent.

GC 7.2.1.2 Except as specified in Paragraph GC 7.2.3.1c), the derogation shall have an expiration date so that the need for it can be systematically reviewed, and progress towards a compliant operation can be monitored. The derogation shall not apply to a period before the date the direction is issued.

GC 7.2.1.3 A derogation shall be granted to an individual **Party** and cannot be transferred.

GC 7.2.2 *Derogation Request*

GC 7.2.2.1 Continued compliance with technical requirements is the responsibility of each relevant affected **Party**. The **Pan-Arab ARC** recognizes there may be occasions when an affected **Party** assesses that it is not able to comply with a requirement,

or that the requirements placed upon it may result in an inefficient outcome either in the short or longer term.

GC 7.2.2.2 Circumstances which may require a derogation request include the following:

- a) to prevent a breach of an affected **Party's** obligations while a system or plant item is restored to compliance with a technical requirement. Such a derogation is likely to be limited to a timescale in which the compliance could reasonably be expected to be restored;
- b) to prevent a breach of an affected **Party's** obligations while changes to a **Code** is made. Such a derogation is likely to be limited to a timescale in which the compliance could reasonably be expected to be restored;
- c) to permit a system or plant item to operate out of compliance with the technical requirement either for a definite or indefinitely time period or for the lifetime of the system or plant item for reasons that are acknowledged by the relevant **Party**.

GC 7.2.3 *Types of Derogation*

GC 7.2.3.1 Three categories of derogation shall be considered:

- a) Definite: continues for a period specified in the direction
- b) Lifetime: specific to a system or plant item and continues for the lifetime of the equipment forming that system or plant item. In case of equipment or plant item replacement, a further derogation is made, or the derogation is revoked. This category of derogation shall be granted when there are strong grounds for inaction to restore compliance.
- c) Indefinite: continues until a further derogation is made or the derogation is revoked. This category of derogation is granted if there are strong grounds for omitting an expiration date.

GC 7.2.4 Lifetime and indefinite derogation shall be issued in very limited circumstances specified by the relevant **TSO**. It is usual practice for derogations to be limited for a period that is specified in the direction. The **Pan-Arab ARC** may issue further directions that can vary or withdraw previous derogations.

GC 7.2.5 *Information Required in a Derogation Request*

GC 7.2.5.1 Where a **Party** has identified that it does not or will not in the future be able to comply with relevant obligations in a provision of this **Code**, the **Party** should make a written request to **Pan-Arab ARC** for a derogation to comply with such obligations.

GC 7.2.5.2 The request shall include:

- a) Details of the applicant, including:
 - i. the full name, address and contact information for the **Party** seeking a derogation;

- ii. a description of the **Party** seeking a derogation (including, where relevant, information on the location of the relevant site for which the derogation is being asked for).
- b) A clear description of the non-compliance including:
 - i. code requirement;
 - ii. the required performance;
 - iii. the existing capability of the system or plant;
- c) A clear description of the reasons why the non-compliance has occurred or is expected to occur.
- d) A comprehensive and, wherever possible, quantitative assessment, of the impact of the non-compliance on:
 - i. Consumers;
 - ii. Security of Supply;
 - iii. Competition;
 - iv. Data reliability and data quality;
 - v. Health and safety and the associated risk management measures;
 - vi. Other **Parties** affected by the non-compliance, including the ability to operate the system.
- e) Demonstration that the requested derogations would have no adverse effect on cross-border trade.
- f) Details of actions to mitigate risks to consumers or other affected **Parties** while the non-compliance exists.
- g) A description of the proposal for restoring compliance (where applicable) including timetable of works.
- h) A description of the alternative actions that have been considered.
- i) The proposed duration of the derogation requested.
- j) All other information needed.

GC 7.2.5.3 All technical terms shall be fully explained, and the request shall be presented as clearly as possible to avoid unnecessary delays in the assessment of the request.

GC 7.2.5.4 The **Party** seeking a derogation shall justify the derogation request in terms of both the specific circumstances and the expected duration. **Parties** seeking a derogation shall give as much notice as possible when making derogation requests since a derogation will not be granted unless **Pan-Arab ARC** is satisfied with the justification supporting the request.

GC 7.2.6 *Assessment of Derogation Applications*

GC 7.2.6.1 Each derogation request is assessed by **Pan-Arab ARC**, individually on its merits, against the criteria outlined in the following, considering:

- a) the nature of derogations;
- b) the likelihood of similar derogation requests in the future;
- c) the effect of the decision on future derogation requests;
- d) any other relevant information.

GC 7.2.6.2 **Pan-Arab ARC** shall consult with the **Party** making the request to clarify points relating to the derogation request.

GC 7.2.6.3 Before making any changes to the criteria, **Pan-Arab ARC** shall consult the relevant **Parties**. The possibility to review and amend the criteria for granting derogations shall not affect the derogations already granted which shall continue to apply until the scheduled expiration date (as specified in any derogation decision).

GC 7.2.6.4 The following set of criteria is used to evaluate the requested derogation. The derogation must not result in:

- a) Significant risks associated with the non-compliance to the affected **Party** seeking a derogation, other relevant **Parties** or connected customers.
- b) Avoidable adverse impacts (immediately or in the longer term) on the affected **Party** seeking derogation, other relevant parties or connected customers.
- c) Additional measures that could be taken to further mitigate the impact of the non-compliance on the affected **Party** seeking a derogation, other relevant **Parties** or connected customers for its duration.
- d) Outstanding objections from other **Parties** who are materially affected by the non-compliance.
- e) Competitive advantages to the affected **Party** seeking a derogation arising from the derogation.
- f) Other reasonable options to address the non-compliance that have not been considered.
- g) Adverse effects on cross-border trade.

GC 7.2.6.5 Where an applicant is unable to satisfy all the above criteria, **Pan-Arab ARC** shall assess how far the applicant's ability to satisfy the criteria is enough to justify the granting of a derogation.

GC 7.2.6.6 **Pan-Arab ARC** shall use his judgement in assessing any derogation requests and shall advise any applicant of additional information requirements that were not included in the original request.

GC 7.2.7 *Derogation Decision*

GC 7.2.7.1 If **Pan-Arab ARC** considers that the derogation request is justified, then it shall issue a direction to the affected **Party** granting the necessary relief from the relevant obligation, for a time period specified in the direction.

GC 7.2.7.2 If **Pan-Arab ARC** considers that the derogation request has not been sufficiently justified, then it shall refuse the derogation.

GC 7.2.7.3 **Pan-Arab ARC** shall revoke a derogation if the circumstances and underlying reasons for the derogation no longer apply.

GC 7.2.7.4 In case of derogation refusal or revoke, the applicant shall present a realistic and comprehensive implementation plan that includes:

- a) The works required to meet compliance, where applicable.
- b) The timetable for those works that show a deadline that is reasonable and is achievable.
- c) Any measures to mitigate the risks to other **Parties** that will be (or have been) taken until the non-compliance is restored.

GC 7.2.8 *Register of Derogations*

GC 7.2.8.1 **Pan-Arab ARC** shall maintain a current register of all derogations that have been granted and refused. The register shall contain:

- a) The technical requirement or requirements for which the derogation was granted or refused.
- b) The content of the derogation.
- c) The monitoring of the expiring of derogations.
- d) The reasons for granting or refusing the derogation.
- e) The consequences resulting from granting the derogations.

GC 7.2.9 *Dispute Resolution*

GC 7.2.9.1 Disputes that arise in relation to **Arab Grid Code** or among **Parties** will be resolved through the following steps.

- a) Bilateral negotiation among the disputing **Parties** as follows:
 - i. If any claim, dispute or difference arises out of or in connection with this **Code**, including any question regarding its existence, breach or validity ("**Dispute**") the aggrieved **Party** shall send by certified mail to the other **Parties** (such aggrieved **Party** and defendant **Parties** together the "**Parties in Dispute**") and to the **Pan-Arab ARC**, a **Notice of Dispute** adequately identifying and providing details of the **Dispute** ("**Notice of Dispute**").

- ii. The **Parties in Dispute** appoint a senior representative with authority to resolve the matter ensuring that the senior representatives meet in good faith to resolve the **Dispute**.
- b) If the dispute is not resolved through negotiations, the dispute shall be resolved through the **Pan-Arab ARC** as follows:
 - i. The **Parties in Dispute** shall provide to the **Pan-Arab ARC** a **Final Notice of Dispute** requesting the relevant committee to decide the matter in **Dispute**. The aggrieved **Party** submitting the **Final Notice of Dispute**, shall coincidentally send copies of all documents submitted to the **Pan-Arab ARC** and to the other **Parties in Dispute** via the same means of communication.
 - ii. The **Parties in Dispute** served with a **Final Notice of Dispute** shall file a **Notice in Response** to both the issuer of the **Final Notice of Dispute** and the **Pan-Arab ARC** within twenty-eight days from the receipt of the **Final Notice of Dispute**
 - iii. The **Pan-Arab ARC** shall decide the **Dispute** based on the information received and provide its written decision to the **Parties in Dispute**, together with reasons for its decision.
- c) If any **Parties in Dispute** is dissatisfied with the decision of the **Pan-Arab ARC**, a **Party in Dispute** may submit the **Dispute** to the **Ministerial Council**.
 - i. The **Parties in Dispute** shall not refer the **Dispute** to the **Ministerial Council** or commence any arbitration in relation to a **Dispute** until they have attempted to settle the **Dispute** by obtaining a decision of the **Pan-Arab ARC**, provided that a **Member State in Dispute** would not be seriously prejudiced by a delay in commencing arbitration. In that case the **Member State in Dispute** shall be entitled to proceed directly to arbitration.
 - ii. The **Party in Dispute** submitting the **Notice of Dispute** to the **Ministerial Council** shall send copies of all documents so submitted to the other **Parties in Dispute** coincidentally, and by the same means of communication.
 - iii. The **Ministerial Council** shall decide the **Dispute** based on the information submitted and provide its written decision to the **Member States in Dispute**, together with reasons for its decision.
- d) If a **Party in Dispute** is dissatisfied with the decision of the **Ministerial Council**, it may submit the **Dispute** to arbitration.
 - i. Subject to compliance with the previous provisions of this Chapter GC 7.2.9, the **Parties in Dispute** have the right to arbitration. All **Disputes** arising out of, or in connection with, the **Code** shall be finally settled by one or more arbitrators. The seat of arbitration shall be elected by **Pan-Arab ARC**.
 - ii. The arbitration result shall be final and binding on all **Parties**.
- e) If a **Party in Dispute** fails to comply with a decision of the arbitrator, it shall be sanctioned with the suspension of its rights to participate in the

PAEM, which may be exercised by the **Pan-Arab ARC** serving notice of such sanction to the non-compliant **Party**.

GC 7.3 Derogation provisions as regards the Connection Code

GC 7.3.1 The relevant **TSO** may, at the request of a **Power-Generating Facility Owner**, an **HVDC System Owner** or a **Demand Facility Owner**, grant derogations from one or more provisions of this **Code** (once acknowledged in its own **National / Regional Grid Code**) for existing and prospective **Power-Generating Modules**, **HVDC Systems** or **Demand Facility** in accordance with the criteria for granting derogations to be published by the relevant **TSO** on its website and available to all existing and prospective **Power-Generating Facility Owners**, **HVDC System Owners** or **Demand Facility Owners**, provided that they are compliant with the provisions of the **Arab TSO Committee**.

GC 7.3.2 If a **Power-Generating Facility Owner**, an **HVDC System Owner** or a **Demand Facility Owner** is unable to comply with any provision of the **Connection Code** (once acknowledged in its own **National / Regional Grid Code**), it shall, without delay, report such non-compliance to the relevant **TSO** and request for a derogation from such provision.

GC 7.3.3 Each **TSO** shall set a procedure that regulates the process of request, analysis and evaluation of a derogation in accordance with its own national regulation.

GC 7.3.4 In the procedure, the relevant **TSO** shall define the list of minimum information that a **Facility Owner** shall include within its request for derogation. The information to be provided by the **Facility Owner** shall identify at least the provision which the **Facility Owner** is, or will be, unable to comply, the technical reason(s) for the non-compliance requiring derogation, and the expected effect on the **Relevant Grid** and cross-border **Energy Transfers**.

GC 7.3.5 The procedure shall identify:

- a) the process to be followed by the **TSO** in evaluating the derogation requests and issuing the decision;
- b) the timings of the process; and,
- c) the conditions under which a decision granting a derogation may be revoked.

GC 7.3.6 The relevant **TSO** shall:

- a) keep a register of all derogations which have been granted.
- b) on request from a **Facility Owner**, provide a copy of the register limited to its own derogation requests.

GC 7.4 Derogation Provisions as Regards the Operation Code

GC 7.4.1 TSOs, any Grid User and any Regional TSO/Market Facilitator, are subject to the Operation Code.

GC 7.4.2 Due to the fact that **TSOs** cannot guarantee the **SoO** irrespective of the performances of the **Facilities** run by the **Grid Users**, **TSOs** shall regularly check and coordinate their **Grid Users** to face with normal or severe disturbances and to facilitate **Restoration** of the **Electricity System** after the collapse. Matter of control should be:

- a) the **Black Start Capability** of the **Power-Generating Modules**;
- b) the capability of the **Power-Generating Modules** to withstand the **Island Operation**;
- c) the regulating capability (active power and voltage) of **Power-Generating Modules**;
- d) the house load operation;
- e) the participation to the **WAMS**;
- f) the load management required to the **DSOs**.

GC 7.4.3 In the spirit and within the limits of Article 3.2.6 of the **GA**, and without prejudice to the **National Grid Codes**, a **TSO** may grant temporary or permanent derogations, to an individual **Grid User**. Such derogations:

- a) will not relieve the responsibilities of the **TSO** against the obligations of the **Operation Code**;
- b) shall concern matters of the **Operation Code**; and,
- c) may be grant only in case of proven impossibility for technical reasons to comply with one or more articles of the **Operation Code**.

GC 8 INTERPRETATION OF THE ARAB GRID CODE

- GC 8.1.1 If any **Facility Owners, TSOs** and other relevant **Parties** require additional interpretation of the wording or application of any provision of any of the **Codes of the Arab Grid Codes**, they may request **Pan-Arab ARC** for such interpretation. Provided that the request is reasonable, the **Pan-Arab ARC** shall provide **Facility Owners, TSOs** and other relevant **Parties** with an interpretation of the relevant part.
- GC 8.1.2 If the **Pan-Arab ARC** is not able to provide the interpretation requested, the review process of the **Arab Grid Code** may be taken into consideration for clarifying the matter.



GC 9 HIERARCHY OF GOVERNANCE DOCUMENTS

GC 9.1.1 In the event of any conflict between the provisions of any of the **Codes** of the **Arab Grid Code** and any **National Grid Codes** or rules, contract, bilateral agreement or arrangement between a **TSO**, a **Grid User** or other relevant **Parties**, the hierarchical order to be respected is the one provided in Section 3.2 of the **GA**:

- a) Level 1: the **General Agreement** once signed by the **Member States**;
- b) Level 2: the **PAEM Agreement**;
- c) Level 3: the **Arab Grid Code**;
- d) Level 4: supporting documents for the **PAEM Agreement** and the **Arab Grid Code**;
- e) Level 5: the memorandum of understanding that the **Member States** may reference for the purpose of clarifying any aspect of the arrangements for the **PAEM** set out herein.



GC 10 CONFIDENTIALITY

GC 10.1.1 All data and information exchanged relating to any of the **Codes** of the **Arab Grid Code** shall be treated by all **Facility Owners, TSOs** or other relevant **Parties** as confidential.

GC 10.1.2 **Confidential Data** does not include:

- a) Information that is in the public domain provided that the information is not in the public domain as a result of a breach of confidentiality by a **Facility Owner, a TSO** or another relevant **Party** seeking to disclose the information or by a **Facility Owner, a TSO** or another relevant **Party** to whom it has disclosed the information.
- b) Information required to be published or information required to be disclosed in any of the **Arab Grid Codes**.
- c) Information that must be disclosed in compliance with a judicial or governmental order or other legal process.

GC 10.1.3 The **Pan-Arab ARC** shall consult with the **Facility Owners, the TSOs** and other relevant **Parties** regarding the publication of any of the data exchanged. Aggregate data may be made available by the **Facility Owners, the TSOs** and other relevant **Parties** when requested by any other **Facility Owners, TSO** or other relevant **Party**. This data shall be used only for the purpose specified in the request and shall be treated by the **Facility Owners, the TSOs** and other relevant **Parties** as confidential. All such disclosure of **Confidential Information** shall be subject to a written **Confidentiality Agreement** duly signed between involved **Facility Owners, TSOs** or other relevant **Parties**. Such confidential information shall not be disclosed to other **Parties** without the express written consent of the **Parties** to the **Confidentiality Agreement**.

GC 11 LANGUAGE

This Arab Grid Code is written in English. In case of any discrepancies between the English version and a version translated into any other language, the English version shall prevail.



GC 12 REFERENCES

- [1] European Commission, "Commission Regulation 2017/1485 establishing a guideline on electricity transmission system operation," 2017.
- [2] European Commission, Network code on requirements for grid connection of high voltage direct current systems and direct current-connected power park modules, Official Journal of the European Union, (L 241/1), 1–65, 2016.
- [3] SAPP, Transmission Planning Criteria, Harare, Zimbabwe., 2012.
- [4] Med-TSO, Proposal of Common Rules about the provision of system services: Mediterranean Grid Code chapter, 2018.
- [5] Med-TSO, Proposal of a Common Tentative Road Map (CTRM) for adoption and compliance with the proposed Common Target Regulatory Framework., 2014.
- [6] EAPP, "EAPP Grid Code 2011," EAPP, 2011. [Online].
- [7] ECRA, "Grid Code Saudi Arabia 2016," 2016. [Online].
- [8] ENTSO-E, *TYNDP 2018 TYNDP CBA from assessment indicators to investment decisions*, 2014.
- [9] ENTSO-E, *TYNDP 2018 Regional Insight Report North South Interconnections East*, 2014.
- [10] ENTSO-E, *TYNDP 2018 Identification of system needs methodology*, 2014.
- [11] ENTSO-E, *TYNDP 2018 Data and expertise as key ingredients*, 2014.
- [12] NERC, *Standard TPL.006.0.1 Assessment Data from Regional Reliability Organizations*, 2014.
- [13] NERC, *Standard TPL.005.0 Regional and Interregional Self-Assessment Reliability Reports*, 2014.
- [14] NERC, *Standard TPL.004.1 System Performance Following Extreme BES Events*, 2014.
- [15] NERC, *Standard TPL.003.1a System Performance Following Loss of Two or More BES Elements*, 2014.
- [16] NERC, *Standard TPL.002.1b System Performance Following Loss of a Single BES Element*, 2014.
- [17] NERC, *Standard TPL.001.4 Transmission System Planning Performance Requirements*, 2014.
- [18] NERC, *Standard TPL.001.1 System Performance Under Normal Conditions*, 2014.
- [19] NERC, *Reliability Standards for the Bulk Electric Systems of North America Updated June 5, 2019*, 2014.
- [20] NERC, *Reliability Assessment Guidebook Version 3.1 August 2012*, 2014.
- [21] ENTSO-E, *Proposed Methodology for Monetization of Security of Supply Adequacy Benefit of TYNDP Projects*, 2014.
- [22] PJM, *PJM Manual 38: Operations Planning Revision: 12*, 2014.
- [23] PJM, *PJM Manual 37: Reliability Coordination Revision: 16*, 2014.
- [24] PJM, *PJM Manual 36: System Restoration Revision: 26*, 2014.
- [25] PJM, *PJM Manual 13: Emergency Operations Revision: 71*, 2014.
- [26] PJM, *PJM Manual 03: Transmission Operations Revision: 55*, 2014.
- [27] Continental Europe, *OPERATION HANDBOOK*, 2014.
- [28] GCCIA, *OC9 Operating Code No. 9 Numbering and Nomenclature*, 2014.
- [29] GCCIA, *OC8 Operating Code No. 8 Safety Coordination*, 2014.

- [30] GCCIA, *OC7 Operating Code No. 7 Contingency Planning and System Restoration*, 2014.
- [31] GCCIA, *OC6 Operating Code No. 6 System Fault and Incident Reporting*, 2014.
- [32] GCCIA, *OC5 Operating Code No. 5 Operational Liaison*, 2014.
- [33] GCCIA, *OC4 Operating Code No. 4 Demand Curtailment*, 2014.
- [34] GCCIA, *OC3 Operating Code No. 3 Operating Reserve*, 2014.
- [35] GCCIA, *OC2 Operating Code No. 2 Operational Planning*, 2014.
- [36] GCCIA, *OC12 Operating Code No. 12 System No Load Energy Losses*, 2014.
- [37] GCCIA, *OC11 Operating Code No. 11 System Tests*, 2014.
- [38] GCCIA, *OC10 Operating Code No. 10 Testing and Monitoring*, 2014.
- [39] GCCIA, *OC1 Operating Code No. 1 Demand Forecasting*, 2014.
- [40] ENTSO-E, *Identification of system needs using a flow based market model approach*, 2014.
- [41] GCCIA, *GCCIA Interconnector Transmission Code Issue 2.1 May 2013 (see PC Planning Code Planning requirements for connection to the transmission network)*, 2014.
- [42] FERC, *FEDERAL ENERGY REGULATORY COMMISSION 18 CFR Parts 35 and 37 (Docket Nos. RM05.17.000 and RM05.25.000; Order No. 890) Preventing Undue Discrimination and Preference in Transmission Service (Issued February 16, 2007) AGENCY*, 2014.
- [43] FERC, *FEDERAL ENERGY REGULATORY COMMISSION 18 CFR Part 35 [Docket No. RM10.23.000; Order No. 1000] Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities (Issued July 21, 2011)*, 2014.
- [44] ENTSO-E, *ENTSO-E Practical implementation document for inclusion of transmission and storage projects in the 10 year network development (TYNDP)2018 2 October 2017*, 2014.
- [45] PJM, *Book 2 Inputs and Process*, 2014.
- [46] ENTSO-E, *ANNEX II Scenario Report. Methodology*, 2014.
- [47] ENTSO-E, *Accompanying document to 2nd ENTSO-E Guideline for Cost Benefit Analysis of Grid Development Projects*, 2014.
- [48] ENTSO-E, *2nd ENTSO-E Guideline For Cost Benefit Analysis of Grid Development Projects FINAL Approved by the European Commission 27 September 2018*, 2014.
- [49] PJM, *2017 PJM Regional Transmission Expansion Plan February 28, 2018 Book 3 Studies and Results*, 2014.
- [50] PJM, *2017 PJM Regional Transmission Expansion Plan February 28, 2018 Book 1 PJM 2017 RTEP in Review*, 2014.
- [51] European Commission, "Commission Regulation 2016/631 establishing a network code on requirements for grid connection of generators," 2016.
- [52] European Commission, *REGULATION (EU) No 347/2013 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 17 April 2013 on guidelines for trans-European energy infrastructure and repealing Decision No 1364/2006/EC and amending Regulations (EC) No 713/2009, (EC) No 714/2009 and (EC) No 715/2009*, 2014.
- [53] Eskom, *The South African Grid Code; The Network Code Version 9.0*, 2014.
- [54] Eskom, *The South African Grid Code; The Information Exchange Code Version 9.0*, 2014.
- [55] Eskom, *The South African Grid Code; System Operation Code Version 9.0*, 2014.
- [56] Eskom, *The South African Grid Code; Preamble Version 9.0*, 2014.

- [57] Med-TSO, *Compendium and summary of relevant codes / regulations / contracts and practices both existing and short term expected Deliverable 1.1. Starting Regulatory framework*, 2014.
- [58] Med-TSO, *Deliverable 2.1 Guidelines for Coordinated Planning a) Grid Planning Methodology*, 2014.
- [59] Med-TSO, *Deliverable 2.1 Guidelines for Coordinated Planning b) Survey and Tools for supporting the Harmonized Planning Process*, 2014.
- [60] Med-TSO, *Deliverable 2.1 Guidelines for Coordinated Planning c) Procedures for the Mediterranean Master Plan*, 2014.
- [61] Med-TSO, *Deliverable 2.1. A Proposal of Common Rules about the provision of system services: Mediterranean Grid Code chapter*, 2014.
- [62] Med-TSO, *Deliverable 2.3 Transparency: Public information harmonization*, 2014.
- [63] European Council, EUCO 169/14, 23 and 24 October 2014.
- [64] European Commission, Commission regulation 2016/1388 Establishing a Network Code on Demand Connection, 2016.
- [65] European Commission, Commission Regulation (EU) 2016/1719 of 26 September 2016 establishing a guideline on forward capacity allocation, 2016.
- [66] European Commission, Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management, 2015.
- [67] European Commission, Commission Regulation (EU) 2017/2195 of 23 November 2017 establishing a guideline on electricity balancing, 2017.
- [68] European Commission, *COMMISSION REGULATION (EU) 2017/2196 of 24 November 2017 establishing a network code on electricity emergency and restoration*, 2017.
- [69] Med-TSO, Mediterranean Project 1, <https://www.med-tso.com/publications1.aspx?f=>, 2015 - 2018.
- [70] Med-TSO, Mediterranean Project 2, <https://www.med-tso.com/publications2.aspx?f=>, 2018-2020.
- [71] FERC, FEDERAL ENERGY REGULATORY COMMISSION (Docket Nos. RM16.17.000; Order No. 860) Final rule on Data Collection for Analytics and Surveillance and Market-based rate purposes (Issued July 18, 2019), 2019.
- [72] PJM, *PJM Manual 10: Pre-Scheduling Operations*, 2014.
- [73] UCTE, UCTE OH – Policy 1: Load-Frequency Control - Final Version (approved by SC on 19 March 2009), 2009.

GC 13 ANNEX A

GC 13.1 Scope

GC 13.1.1 This Annex describes the institutional structure created to regulate and operate the **PAEM** and identifies the different classes of **PAEM Participants** and their rights and obligations under the **PAEM Agreement** and this **Arab Grid Code**.

GC 13.1.2 This topic is governed in Chapter 3 of the **GA**. Therefore, the scope of this Annex is only for referencing purposes, and any change in the **GA** on this matter shall prevail on the contents of this Annex.

GC 13.2 Description of Governing Institutions

GC 13.2.1 The institutional organization governing the **PAEM** is specified in the **GA**. The regulatory organization comprises:

- a) The Arab Ministerial Council for Electricity (“Ministerial Council”);
- b) The Pan-Arab ARC;
- c) The Arab TSOs Committee; and
- d) The Secretariat.

GC 13.2.2 The **Ministerial Council** is an existing council that has final approval authority over most aspects of the **PAEM**. It is not involved with the day-to-day operation of the **PAEM**.

GC 13.2.3 The **GA** creates the **Pan-Arab ARC**, the **Secretariat** and the **Arab TSOs Committee**.

GC 13.2.4 The operational structure of the **PAEM** comprises the **Regional Market Facilitator** and the national **TSOs**. The **GA** creates the **Regional Market Facilitator**, while the national **TSOs** are existing bodies responsible for the day-to-day operation of the domestic electricity markets of **Member States**.

GC 13.2.5 The **Secretariat** is responsible for conducting day-to-day administrative tasks, facilitating the work of the regional market committees, monitoring and maintaining comprehensive information systems and serving corresponding needs of the **Ministerial Council**, the **Pan-Arab ARC** and the **Arab TSOs Committee**.

GC 13.2.6 The **Arab TSOs Committee** will include as members the national **TSOs** and the **Regional Market Facilitator**. It does not play any direct role in the governance or operation of the **PAEM**.

GC 13.2.7 The **Pan-Arab ARC** will provide regulatory oversight of the **PAEM** and will include as members the **National Regulators**.

GC 13.2.8 The **GA**, this **Arab Grid Code** and the **PAEM Agreement**, and subsequent regulations adopted under this **Arab Grid Code**, constitute the **PAEM**

governance documentation which establishes the rules to be followed by the **Governing Institutions** and **PAEM Participants**.

GC 13.2.9 The **Governing Institutions** and the **PAEM** governance documentation aim to ensure that **PAEM** operation and administration comply with the objectives and functions established in the **GA** in a transparent and efficient manner.

GC 13.3 PAEM Regulation - The Pan-Arab ARC

GC 13.3.1 The **Pan-Arab ARC** is the regulatory entity for the **PAEM** created per the **GA**. The roles and responsibilities of the **Pan-Arab ARC** are to:

- a) Ensure compliance with the rules and legal framework of the **PAEM** including the **GA**, the **PAEM Agreement** and this **Arab Grid Code**;
- b) Ensure that **PAEM Participant** behavior and the functioning of the **PAEM** is consistent with the intent of the **GA**;
- c) Review and advise on various fees and tariffs for regulated activities in the **PAEM** including each **Member State's** transmission services charge to be applied to transactions in the **PAEM**;
- d) Ensure transmission services charges are applied to transactions in the **PAEM** in a fair and non-discriminatory manner;
- e) Review and advise on proposed changes to the **PAEM Agreement**;
- f) Review and approve proposed changes to this **Arab Grid Code**;
- g) Review and advise on proposals for expansion of **International Interconnections**;
- h) Review and approve generation capacity **Reserve** criteria;
- i) Review and advise on rules governing allocation of **International Interconnection** capacity;
- j) Review and approve the methodology for calculation of available transmission capacity;
- k) Review and advise on credit obligations and payment default procedures;
- l) Mediate disputes between and among **PAEM Participants** and the **Governing Institutions**;
- m) Coordinate with the **National Regulators**; and
- n) Facilitate the development of the **PAEM**.

GC 13.3.2 The **Pan-Arab ARC** constitutes an entity legally sanctioned and authorized to carry out all acts, contracts and other actions required to implement its mandate to regulate the **PAEM**.

GC 13.3.3 In its capacity to ensure compliance with the **GA**, the **PAEM Agreement** and this **Arab Grid Code** and promote development of the **PAEM**, the **Pan-Arab ARC** is

authorized to request audited accounting information of **PAEM Participants** and the **Governing Institutions**.

GC 13.3.4 In the fulfillment and development of its objectives and capacities, the **Pan-Arab ARC** is responsible for:

- a) Recommending penalties in cases of non-compliance or breach of this **Arab Grid Code**;
- b) Reviewing and approving the facilities that make up the **Grid and International Interconnections**;
- c) Reviewing and recommending proposals for construction of new **International Interconnection** facilities;
- d) Reviewing and recommending accounting principles for entities participating in the **PAEM**;
- e) Reviewing and advising on the budgets and tariffs for the **Regional Market Facilitator**;
- f) Reviewing and advising on transmission service charges for application to transactions in the **PAEM**;
- g) Convening the **Market Monitoring Group** to reside within the **Secretariat** to investigate and analyze situations of potential market power abuse;
- h) Preparing periodic **Regulation Reports** evaluating the status of **PAEM** development in meeting its objectives; and
- i) Approving changes to this **Arab Grid Code**.

GC 13.4 **PAEM Administration and Operation – The Regional Market Facilitator**

GC 13.4.1 The **Regional Market Facilitator** is the market operator entity of the **PAEM** created per the **GA**. The **Regional Market Facilitator** directs operation of the **PAEM** in accordance with the **GA** and the rules set out in the **PAEM Agreement** and this **Arab Grid Code**.

GC 13.4.2 The **Regional Market Facilitator** is legally authorized to carry out all acts, contracts and other actions required to direct operation of the **PAEM**.

GC 13.4.3 The **Regional Market Facilitator**, in conjunction with the national **TSOs**, is responsible for electricity scheduling, billing and settlement in the **PAEM** based on the principles of fairness, efficiency, safety and transparency. The **Regional Market Facilitator** is responsible for:

- a) Submitting procedures for **PAEM** operation to the **Arab TSOs Committee** and the **Pan-Arab ARC** for approval;
- b) Conducting **PAEM** operation and scheduling in conjunction with the national **TSOs** using economic criteria, seeking to maintain satisfactory levels of security, quality and reliability;

- c) Reviewing and verifying in conjunction with national **TSOs** the technical feasibility of bilateral contract transactions;
- d) Managing commercial transactions in the **PAEM**;
- e) Developing for review by the **Arab TSOs Committee** and subsequent approval by the **Pan-Arab ARC** an auction process for international interconnection capacity;
- f) Administering the approved auction process for international interconnection capacity;
- g) Developing in conjunction with **PAEM Participants**, the national **TSOs** and the **Arab TSOs Committee** the **Master Plan** setting out the indicative expansion plan for generation and transmission, including reserve margins;
- h) Coordinating **PAEM** operation with the national **TSOs**;
- i) Developing and publishing representative market prices reflecting marginal production costs in each **Member State** based on international fuel prices;
- j) Developing and publishing representative bilateral contracts for services that can be purchased and sold in the **PAEM**;
- k) Providing **PAEM Participants** access to the market database and methodologies used by the **Regional Market Facilitator**;
- l) Providing public access to non-confidential information in the market database; and
- m) Communicating the **Master Plan** to the **Pan-Arab ARC**, the national **TSOs**, **PAEM Participants** and the **Arab TSOs Committee** once it has been approved by the **Ministerial Council**.

GC 13.5 The Arab TSOs Committee

GC 13.5.1 The **Arab TSOs Committee** is created per the **GA** and is legally authorized to carry out all acts, contracts and other actions required to perform its responsibilities, including:

- a) encourage coordination and cooperation among national **TSOs**;
- b) promote market integration, reliability and security of supply, efficiency, and technical innovation;
- c) coordinate implementation of network plans;
- d) coordinate administration of network codes;
- e) prepare standards and procedures for review by the **Pan-Arab ARC**;
- f) prepare and submit to the **Pan-Arab ARC** for review the **Capacity Obligation** and the reserve sharing obligation based on minimum generation capacity reserve requirements to be carried by **Member States**;

- g) assess and make recommendations relating to the need for changes to the **Arab Grid Code**;
- h) review and approve changes to standards and other lower hierarchy documentation associated with the **Arab Grid Code**;
- i) research and development relating to reliability and security of supply issues;
- j) promote public acceptability of the **PAEM**; and
- k) participate in the development of energy policy.

